

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method of growing a gallium nitride single crystal using a flux comprising at least sodium metal, said method comprising:
growing said gallium nitride single crystal in an atmosphere comprising gas mixture comprising nitrogen gas ~~under~~ and having a total pressure of 300 atms to 1200 atms and at a temperature of 850°C to 1200°C, said atmosphere having a nitrogen partial-pressure of 120 atms to 600 atms.
2. (Currently Amended) The method of claim 8, wherein said atmosphere has a nitrogen ~~partial-pressure~~ of 100 atms to 2000 atms.
3. (Previously Presented) The method of claim 8, wherein said crystal is grown at a temperature of 900°C to 1500°C.
4. (Previously Presented) The method of claim 1, wherein said crystal is grown at a temperature of 950°C to 1200°C.
5. (Previously Presented) The method of claim 1, further comprising the step of elevating a crucible containing said flux until a seed crystal contacts said flux.
6. (Previously Presented) The method of claim 1, wherein said gallium nitride single crystal is grown using a system for hot isostatic pressing.
7. (Cancelled).

8. (Currently Amended) A method of growing a gallium nitride single crystal using a crucible containing a flux comprising at least sodium metal, with a moving part attached to a lower portion of the crucible and a seed crystal fixed over the crucible, said method comprising:

elevating the crucible by the moving part until the seed crystal contacts said flux;

growing said gallium nitride single crystal in an atmosphere comprising a gas mixture comprising nitrogen gas ~~under and having~~ a total pressure of 300 atms to 2000 atms; and

driving the crucible downward by the moving part to separate the seed crystal from said flux.

9. (Previously Presented) The method of claim 8, wherein said crystal is grown at a temperature of 950°C to 1200°C.

10. (Previously Presented) The method of claim 8, wherein said gallium nitride single crystal is grown using a system for hot isostatic pressing.

11. (New) The method of claim 1, wherein the gallium nitride single crystal is grown at a rate of at least 25 $\mu\text{m/hr}$.

12. (New) The method of claim 8, wherein the gallium nitride single crystal is grown at a rate of at least 25 $\mu\text{m/hr}$.